

Translation

PATENT COOPERATION TREATY

PCT/JP2003/016129



PCT

539143

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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|--|---|---|
| Applicant's or agent's file reference M961-PCT | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
| International application No. PCT/JP2003/016129 | International filing date (day/month/year) 16 December 2003 (16.12.2003) | Priority date (day/month/year) 17 December 2002 (17.12.2002) |
| International Patent Classification (IPC) or national classification and IPC B32B 27/34 | | |
| Applicant UBE INDUSTRIES, LTD. | | |

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
- This report contains indications relating to the following items:
 - ☒ Box No. I Basis of the report
 - ☐ Box No. II Priority
 - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Box No. IV Lack of unity of invention
 - ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☒ Box No. VI Certain documents cited
 - ☐ Box No. VII Certain defects in the international application
 - ☐ Box No. VIII Certain observations on the international application

| | |
|---|---|
| Date of submission of the demand 01 June 2004 (01.06.2004) | Date of completion of this report 27 January 2005 (27.01.2005) |
| Name and mailing address of the IPEA/JP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/016129

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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International application No.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

| | | | |
|-------------------------------|--------|----------|-----|
| Novelty (N) | Claims | 6 | YES |
| | Claims | 1-5, 7-9 | NO |
| Inventive step (IS) | Claims | | YES |
| | Claims | 1-9 | NO |
| Industrial applicability (IA) | Claims | 1-9 | YES |
| | Claims | | NO |

2. Citations and explanations (Rule 70.7)

Document 1: WO, 01-094110, A1 (EMS-CHEM AG), 13 December, 2001 (13.12.01), & JP, 2003-535717, A
Document 2: WO, 02-000026, A1 (Wolff Walsrode AG), 3 January, 2002 (03.01.02), & JP, 2004-501005, A
Document 3: WO, 00-23506, A1 (Wolff Walsrode AG), 27 April, 2000 (27.04.00), & JP, 2002-527592, A
Document 4: WO, 00-76862, A1 (International Paper Company), 21 December, 2000 (21.12.00), & JP, 2003-502180, A
Document 5: JP, 10-95083, A (Mitsubishi Plastics, Inc.), 14 April, 1998 (14.04.98)
Document 6: JP, 10-95075, A (Mitsubishi Plastics, Inc.), 14 April, 1998 (14.04.98)
Document 7: JP, 5-293916, A (Ube Industries, Ltd.), 9 November, 1993 (09.11.93)
Document 8: JP, 8-127089, A (Ube Industries, Ltd.), 21 May, 1996 (21.05.96)
Document 9: JP, 10-24505, A (Kuraray Co., Ltd.), 27 January, 1998 (27.01.98)
Document 10: EP, 1122060, A1 (ATOFINA), 8 August, 2001 (08.08.01), & JP, 2001-277441, A

The subject matters of claims 1-5 and 7-9 do not appear to be novel or to involve an inventive step since they are disclosed in documents 1-4 cited in the ISR.

The subject matters of claims 1-4 and 7-9 are described in document 1 (see the claims, paragraphs [0041], [0042], [0046], [0050] and [0051] of JP, 2003-535717, A).

The subject matters of claims 1-5 are described in document 2 (see the claims, paragraphs [0016] and [0019] to [0023], and Example 3 of JP, 2004-501005, A).

The subject matters of claims 1-4 are described in document 3 (see the claims and paragraphs [0032] to [0035] of JP, 2002-527592).

The subject matters of claims 1, 3-5 and 8 are described in document 4 (see the claims, [0021], [0039], [0040], [0042] and [0046], and Example 2 of JP, 2003-502180, A).

The subject matter of claim 5 does not appear to involve an inventive step in view of documents 1 and 3.

Since it is well known to provide a polyolefin layer in a multilayer pipe, a multilayer container and the like, a person skilled in the art could have easily conceived of further providing a polyolefin layer in the multilayer complex of the document 1 and of providing a denatured polyolefin layer between layers.

A person skilled in the art could use a denatured polyolefin layer as a binding layer in the multilayer film of document 3 as required.

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Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

| Application No. Patent No. | Publication date (day/month/year) | Filing date (day/month/year) | Priority date (valid claim) (day/month/year) |
|-------------------------------|--------------------------------------|---------------------------------|---|
| JP 2003-247672 A [E, X] | 05.09.2003 | 28.01.2003 | |

2. Non-written disclosures (Rule 70.9)

| Kind of non-written disclosure | Date of non-written disclosure (day/month/year) | Date of written disclosure referring to non-written disclosure (day/month/year) |
|--------------------------------|--|---|
| | | |

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: V

The subject matter of claim 6 does not appear to involve an inventive step in view of documents 1-4, and documents 7 and 8 cited in the ISR.

Documents 7 and 8 describe that one side of a phyllosilicate is 0.002 to 1 μm long and 6 to 20 \AA thick, and that the phyllosilicates are dispersed uniformly in a composite with spaces of more than 20 \AA on an average kept between them. A person skilled in the art could have easily conceived of using the phyllosilicates of documents 7 and 8 as phyllosilicates described in documents 1-4.

The subject matter of claim 7 does not appear to involve an inventive step in view of documents 2-4. A person skilled in the art could optimize the thickness of each layer as required.

The subject matters of claims 1-9 do not appear to involve an inventive step in view of documents 7 and 8, and documents 9 and 10 cited in the ISR.

A fuel tube and a tank, each of which has an EVOH layer and a polyamide layer, are disclosed in documents 9 and 10. Document 9 (paragraphs [0042] to [0044]) describes that an EVOH layer is provided between polyamide layers and that an adhesive resin layer composed of denatured polyethylene is provided between layers. Document 10 describes that an HDPE layer is provided further through a binder layer composed of denatured polyethylene.

Using, as a polyamide layer, a layer in which phyllosilicates are dispersed uniformly is not mentioned in documents 9 and 10.

Nevertheless, documents 7 and 8 describe that a layer of a composite containing polyamide resin and phyllosilicates is provided in a multilayer fuel tube and a fuel tank, that one side of a phyllosilicate is 0.002 to 1 μm long and 6 to 20 \AA thick, and that the phyllosilicates are dispersed uniformly in a composite with spaces of more than 20 \AA on an average kept between them. A person skilled in the art could have easily conceived of using the polyamide composite layer of documents 7 and 8 as the polyamide layer of documents 9 and 10.